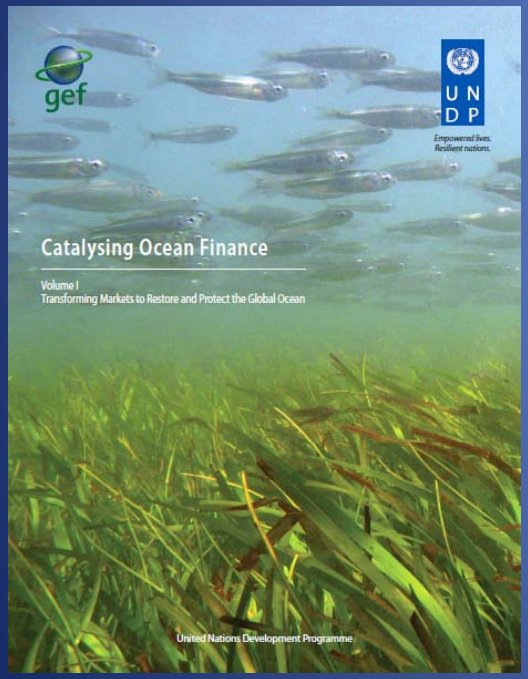
Regionalizing the SDGs: Perspectives of UNDP/GEF



Andrew Hudson

UNDP Water & Ocean Governance Programme

Workshop 1.3: Coastal and Ocean Governance in the Seas of East Asia: from Nation to Region

East Asian Seas Congress 2015

Danang, Vietnam

16-21 November 2015

Value of ‘blue’ ocean to the ‘green’ economy

- Food security
- Tourism
- Transport
- Energy (fossil fuels, renewables…)
- Ecosystem Services (carbon and nutrient cycling , climate moderation, habitat, etc.)
- Poverty Reduction – GDP contribution ocean sectors as high as 20% in some developing countries

Global market value of ocean goods & services

Sector	Value
Fisheries & Aquaculture	$100 billion/year, 260 million jobs
Transport/Shipping	$435 billion/year, 13.5 million jobs, moves 90% international trade
Oil & Gas	30% global oil is offshore, $900 billion/year, increasing
Tourism	5% global GDP, 6% global jobs, coastal is major segment, ~$271 billion/year (US as proxy)
Global contribution of the 'ocean economy'	>$1.7 trillion/year, 400 million jobs

But our oceans – and trillions $ in goods and services - are at serious risk ….

Overfishing

Coastal hypoxia

Invasive Species

Habitat Loss

Ocean Acidification

Most are accelerating

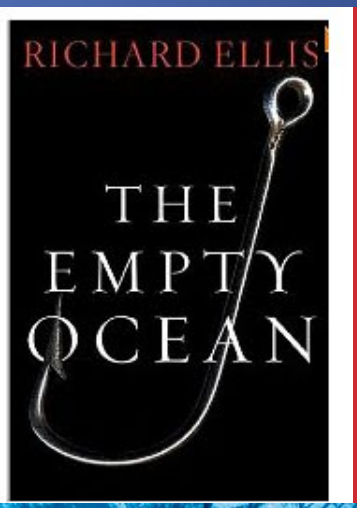
Global costs of poor ocean management on socioeconomic development

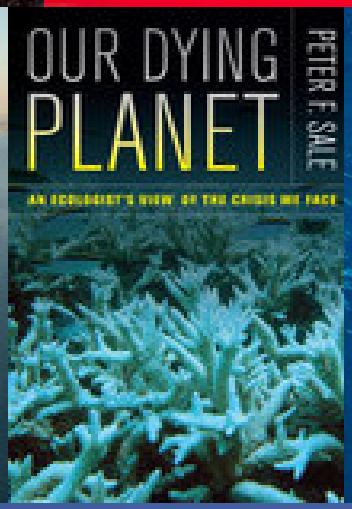
Ocean Issue	Costs to Society
Overfishing	$50 billion/year
Coastal Hypoxia/Eutrophication	$200 - $790 billion/year
Invasive Aquatic Species	$100 billion/year
Coastal Habitat Loss	Unknown but large
Ocean acidification	$1.2 trillion/year (2100) in “BAU” scenario
Total Costs **today** at least	$350 - $940 billion/year

Market & Policy failures drive ocean degradation

Ocean Issue	Market/Policy Failure(s)
Coastal hypoxia/eutrophication (fertilizer & manure run-off, poorly treated wastewater)	Lack of internalizing cost of nutrient damage into price of fertilizer and human & livestock wastewater management
Marine Invasive Species – shipping as main vector	Lack of internalizing economic damage invasives into shipping operations, internalize cost to clean up ship ballast water
Loss Coastal Habitats	Lack proper valuation of ecosystem services coastal habitats provide
Overfishing	Lack internalizing socioeconomic and environmental costs of overfishing into (sustainable) fisheries management; 'bad' subsidies to fisheries
Ocean acidification (dissolution of anthropogenic CO_2 into ocean)	Lack of proper price on carbon which incorporates environmental and economic damage of acidification; fossil fuel subsidies

Is declining ocean health irreversible? - Not necessarily





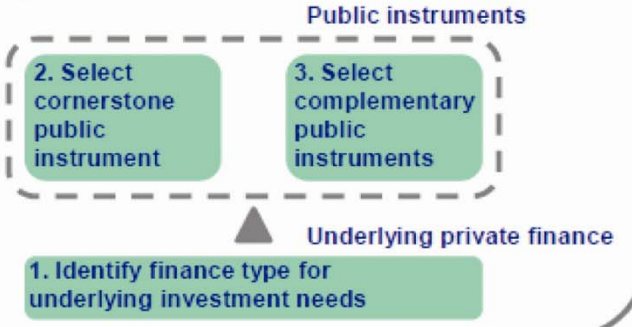
UNDP/GEF four step planning approach to ocean protection and restoration

Step 1: Prioritize ocean issues based on sound scientific & economic analysis

Step 2: Identify barriers creating market failures that drive ocean degradation

Barriers to Sustainable Ocean Use	
Information Barriers	
Regulatory Barriers	x
Technology Barriers	x
Institutional Barriers	
Financial Sector Barriers	x

Step 3: Determine appropriate mix of policy instruments to remove barriers



Step 4: Implement policy instruments, catalyse public and private financial flows

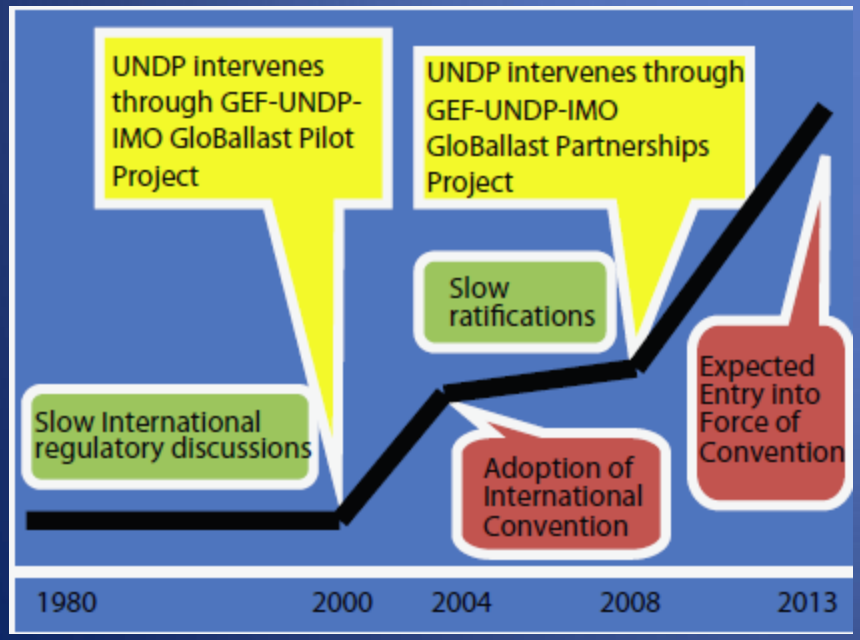
	International	National Sub-national
Public funds	x	x
Environmental markets	x	
Private funds		x

Three Ocean Planning Instruments

- Transboundary Diagnostic Analysis/Strategic Action Programme (TDA/SAP)
- Integrated Coastal Management/Framework for Sustainable Development of Coastal Areas (ICM/SDCA)
- Building on Regional and Global Ocean Legal Frameworks

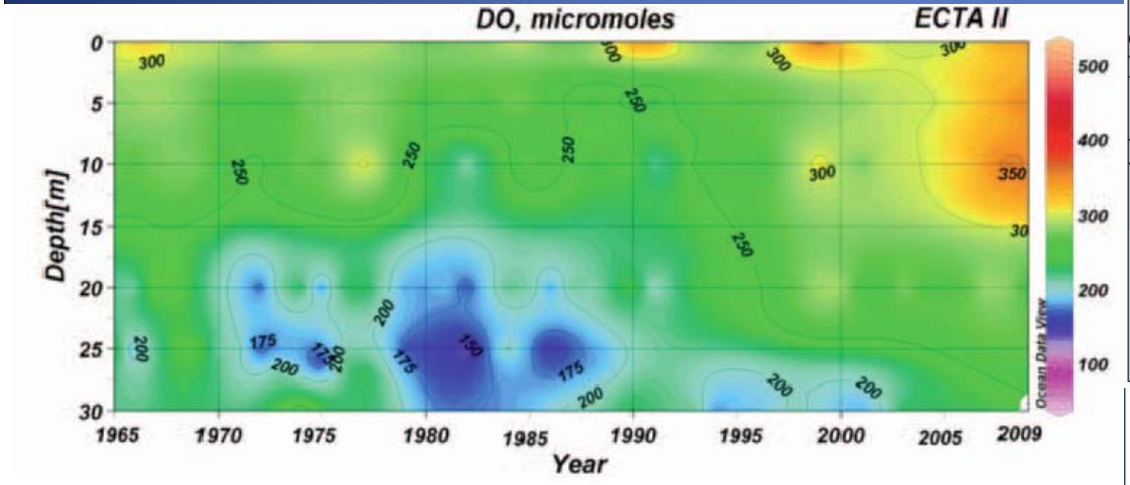
GEF-UNDP-IMO GloBallast Programme

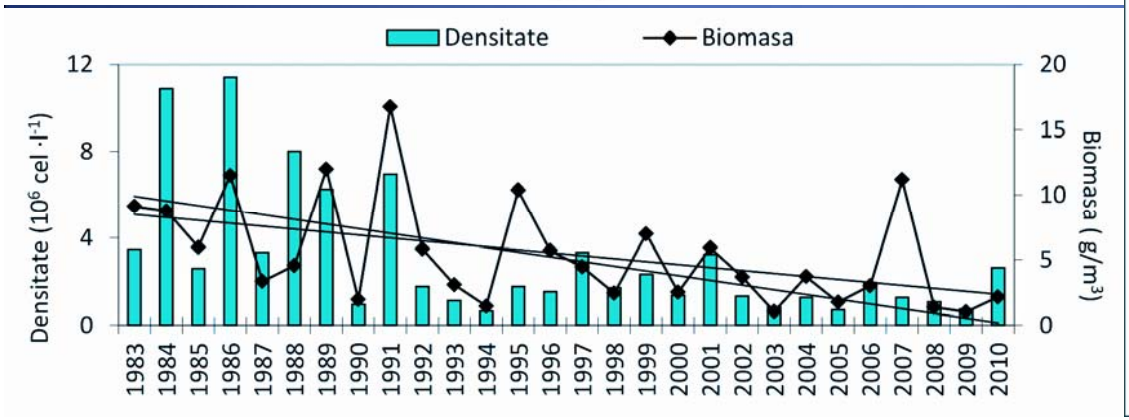
- 2004 adoption international convention ship's ballast water & sediments; likely to come into force soon
- 70+ countries & several regions reforming policies & legislation for convention compliance
- $100 million+ ballast water treatment R&D
- New ballast water treatment industry ~$80 billion

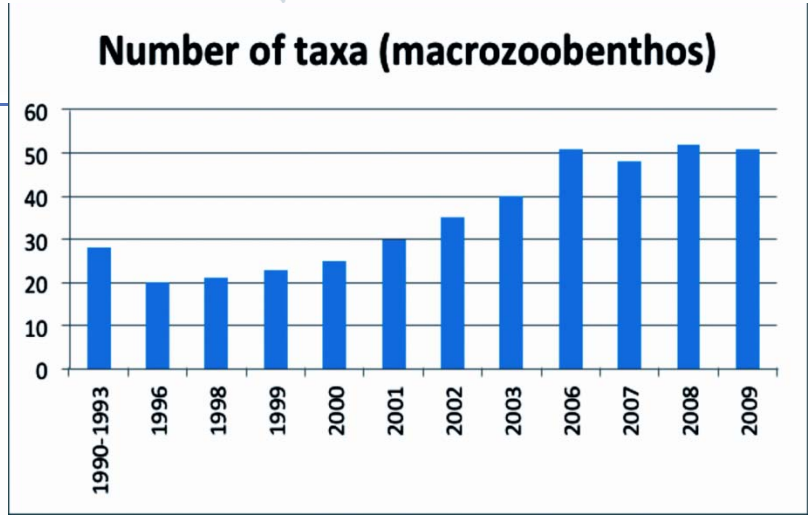


UNDP-GEF support to Reversing Eutrophication & Hypoxia in Danube River/Black Sea

- $3 billion catalysed nutrient reduction investments (>200) delivered 25,000 mt/year N, 4,000 mt/year P pollution reduction, comparable to observed reductions in Danube nutrient loads to Black Sea
- Reversal of large scale Black Sea hypoxic area, ecosystem in recovery
- For N, P, Chl-a, 68, 88, 100% Danube waters rated Class I or II water quality







Tangible Impacts of these methodologies on other marine ecosystems

Yellow Sea Large Marine Ecosystem – commitments to reduce fishing pressure 25-30%, reduce nutrient discharges 10% every 5 years, scale up MPAs and sustainable mariculture	**Rio de la Plata/Maritime Front** - $2.62 billion in commitments to pollution reduction and wetland protection
East Asian Seas/PEMSEA – 14% of region's coastline with ICM programmes against near zero baseline early 90's; 25% ICM target by 2021; over $10 billion in cumulative environmental investments leveraged through ICM programmes	**W/C Pacific Ocean Fisheries** – fisheries representing 50% world's tuna stocks moving towards sustainability – VMS, observers, ecosystem-based catch quotas, etc. Tripling of tuna landings/value by Pacific Island countries to 500k tons worth $700 million/yr.

Why do the LMEs such as those in East Asia require a transboundary/multi-country cooperative approaches?

- 55% of the world's 64 LMEs are shared by two or more countries
- ALL of East Asia's seven LMEs are shared by two or more countries
- A sizeable fraction of environmental management challenges faced by East Asia's LMEs are transboundary in nature
  - Nutrient and plastics pollution
  - Migratory fish stocks
  - Invasive aquatic species
  - Ocean acidification (global)

Which SDGs are important for sustainability in the East Asian Seas?

SDG14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development

#	Target Description
14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
14.3	Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
14.5	By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

SDG14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Target #	Target Description
14.6	By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies….
14.7	By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
14.a	Increase scientific knowledge, develop research capacity and transfer marine technology …..in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries
14.b	Provide access for small-scale artisanal fishers to marine resources and markets
14.c	Ensure the full implementation of international law, as reflected in the United Nations Convention on the Law of the Sea for States parties thereto, including, where applicable, existing regional and international regimes for the conservation and sustainable use of oceans and their resources by their parties

SDG6 - Ensure availability and sustainable management of water and sanitation for all

Target #	Target Description	Linkage to East Asian Seas
6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation….	Access to sanitation reduces human waste burden to waterways & coastal areas
6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and increasing recycling and safe reuse by [x] per cent globally	Enhanced wastewater treatment and other pollution reduction reduces stress on coastal areas.
6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Improved water use efficiency maintains freshwater flows needed by coastal ecosystems
6.5	By 2030, implement integrated water resources management at all levels, including thru transboundary cooperation…	Upstream IWRM benefits downstream coastal areas
6.a	By 2030, expand int'l cooperation & capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling & reuse technologies	EAS countries can benefit from increased capacity in all these areas several of which have knock-on effects to protecting marine

SDG1 – End poverty in all its forms everywhere

Target #	Target Description	Linkage to East Asian Seas
1.4	By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including micro-finance	Ensuring the region's poor have secure tenure to (sustainably) harvested marine resources contributes to creating livelihoods and poverty alleviation
1.5	By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	The lives and livelihoods of the poor in East Asia (and elsewhere) are the most vulnerable to climate-related events

SDG2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target #	Target Description	Linkage to East Asian Seas
2.3	By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets …	On a per metric ton of fish harvested basis, small scale fisheries (and aquaculture) create 44 and 23 times more jobs than industrial fisheries, respectively
2.5	By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	Globally, aquaculture now produces 46% of consumed seafood products and East Asia is the global center of both freshwater aquaculture and mariculture

SDG5 - Achieve gender equality and empower all women and girls

Target #	Target Description	Linkage to East Asian Seas
5.a	Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	East Asia & Pacific lowest Gender Inequality Index of 6 developing regions at 0.331 (UNDP HDR 2014)

SDG7 – Ensure access to affordable reliable, sustainable and modern energy for all

Target #	Target Description	Linkage to East Asian Seas
7.2	By 2030, increase substantially the share of renewable energy in the global energy mix	Potential in EAS for offshore wind, wave energy, OTEC, marine biomass, etc.

SDG8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

#	Target Description	Linkage to East Asian Seas
8.9	By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	Coastal tourism makes large contribution to GDP and jobs; EAS economies world's highest ocean sectors as % of GDP

SDG11 - Make cities and human settlements inclusive, safe, resilient and sustainable

#	Target Description	Linkage to East Asian Seas
11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality & municipal & other waste management	Many large EAS urban areas are significant hot spots for pollution and habitat loss.
11.b	By 2020, increase by [x] per cent # of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters; develop and implement…. holistic disaster risk management at all levels	East Asia as THE most coastal and archipelagic region in the world faces particular challenges with enhancing water & ocean-related climate & disaster resilience

SDG12 - Ensure sustainable consumption and production patterns

Target #	Target Description	Linkage to East Asian Seasa
12.2	By 2030, achieve the sustainable management and efficient use of natural resources	Broad application to marine environmental management in East Asia
12.3	By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	In US, study shows about 47% of seafood is lost along the supply chain (by-catch, distribution, consumers)
12.4	By 2020, achieve the environmentally sound management of chemicals & all wastes throughout their life cycle, in accordance with agreed international frameworks, & significantly reduce their release to air, water & soil in order to minimize their adverse impacts on human health & environment	Sound management of chemicals and wastes would result in substantial reductions in pollution loads to East Asian Seas
12.5	By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	As elsewhere, East Asia needs to move towards a much more 'circular' economy of materials use.

SDG13 - Take urgent action to combat climate change and its impacts

Target #	Target Description	Linkage to East Asian Seas
13.1	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	East Asian Seas countries impacted by all CC impacts including sea level rise, enhanced frequency and intensity of extreme weather and hydrological events, ocean acidification, coral bleaching, ocean warming impacts on ecosystems/fisheries
13.2	Integrate climate change measures into national policies, strategies and planning	
13.3	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	

Further SDG linkages include:

SDG #	SDG Description	Linkage to East Asian Seas
SDG4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	East Asia 3rd of 6 developing regions with mean 7.4 years of schooling; 94.4% adult literacy rate (UNDP HDR 2014)
SDG9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	East Asia fastest growing economic region on earth with associated rapid growth in infrastructure including coastal
SDG16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Marine and coastal management institutions in EAS and elsewhere need to align with the principles of SDG 16
SDG17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	Partnerships in East Asia such as PEMSEA and many others are essential to realizing the SDGs in East Asian Seas

The ocean governance and management framework provided by SDS/SEA, continued scaling up of ICM, and the EAS LME SAPs positions the region very well for effective implementation of SDGs 14, 6 and other linked SDGs, at local, national and regional levels